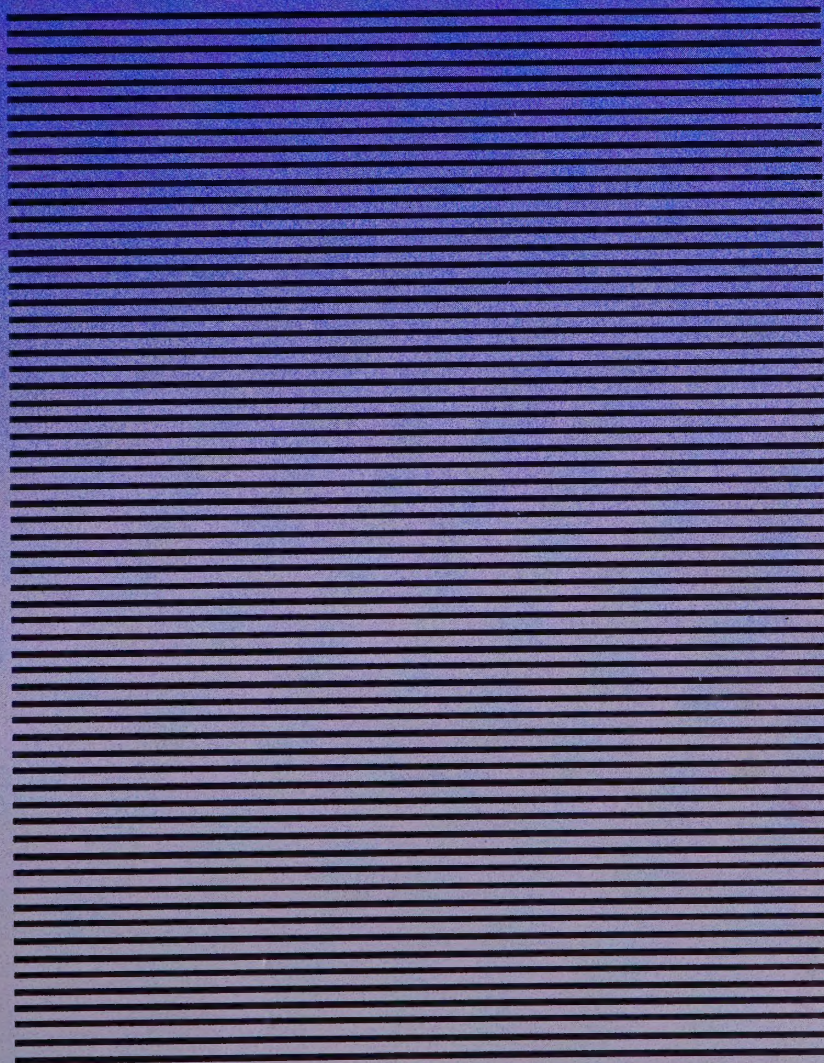




Proposal for the  
Development of a Canadian Polar  
Information System

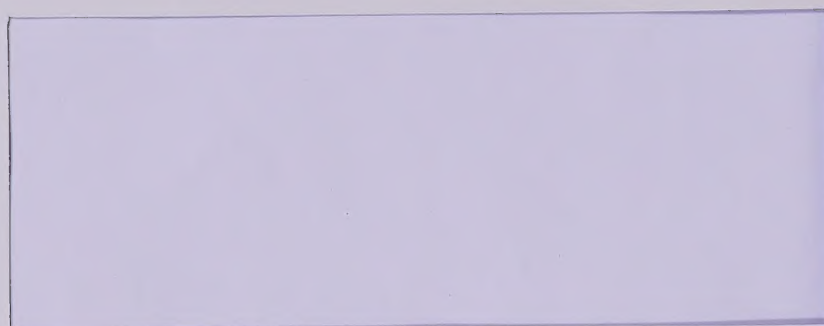


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The Arctic Institute of North America

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This proposal contains a design overview and cost estimate for the Canadian Polar Information System described in the report Canada and Polar Science.

Proposal for the  
Development of a Canadian Polar  
Information System

The Canadian Polar Information System (CPIS) will be formed through the merger of a small number of existing polar information systems and the creation of a new database. It will be directed by a Research Committee within the Canadian Polar Research Commission, and will be assisted by a Technical Advisory Committee.

CPIS will provide references to three types of information: documents, research projects, and people. It will cover all subjects, will focus on the Canadian Arctic, and will be linked to international polar information systems. CPIS will provide information in both written and pictorial formats, and will enhance the delivery of information to people in the North. CPIS will collect information from many small polar information centres in both northern and southern Canada, and will provide funding to these centres to cover the costs that incur in maintaining such information.

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# Canadian Polar Information System

## Executive Summary

This proposal contains a design overview and cost estimate for the Canadian Polar Information System recommended in the report Canada and Polar Science.

The Canadian Polar Information System (CPIS) will be formed through the merger of a small number of existing publicly-accessible Canadian polar databases. It will be directed by a <sup>doing what</sup> Management Committee which reports to the Canadian Polar Research Commission, and will be assisted by a Technical Advisory Committee.

CPIS will provide references to three types of information: documents, research projects, and people. It will cover all subjects, will focus on the Canadian Arctic, and will be linked to <sup>what systems? there are none in existence</sup> international polar information systems. CPIS will provide information in both online and printed formats, and will <sup>for a fee?</sup> emphasize delivery of information to people in the North. CPIS will collect information from many small polar information centres in both northern and southern Canada, and will provide funding to these centres to cover the costs they incur in submitting such information.

Based upon estimates of the amount of Canadian polar information, the ongoing operating cost of CPIS will be approximately \$800,000 per year.





## Canadian Polar Information System

The purpose of this proposal is to outline a design, with preliminary cost estimates, for the Canadian Polar Information System recommended in the report Canada and Polar Science.

The authors of Canada and Polar Science left the detailed mandate and structure of the polar information system to be determined at a later date. In order to derive preliminary cost estimates this proposal makes many assumptions about the system's eventual design. The Arctic Institute of North America is uniquely qualified to make such assumptions because of its experience in creating and operating the Arctic Science and Technology Information System (ASTIS). Nevertheless, it must be emphasized that the actual design of the Canadian Polar Information System will be determined by the Management Committee (see below) based on the needs of the system's potential users.

### Management

The Canadian Polar Information System (CPIS) will be directed by a Management Committee which reports to, or is a committee of, the Canadian Polar Research Commission. The main purpose of the Management Committee will be to represent the interests of the users of the system. Its members will therefore be chosen to represent such constituencies as northerners, the scientific community, industry, and policy-makers in the federal and territorial governments. The Management Committee will set goals for CPIS and will measure progress towards the attainment of those goals.





A Technical Advisory Committee will advise CPIS on matters related to standards and technology. It will include representatives from the National Research Council's Canada Institute for Scientific and Technical Information and from the National Library, as well as from the organizations that are managing and operating CPIS.

The Canadian Polar Information System will be formed through the merger of a small number of existing publicly-accessible Canadian polar databases. The organizations that produce these databases, and that therefore will produce CPIS, will be responsible for the system's day-to-day management.

#### Scope

The Canadian Polar Information System will provide references to the following types of information:

- a. Documents - CPIS will contain citations with abstracts to all types of written information. CPIS will rely on existing libraries to store and deliver documents, and this proposal does not therefore request funding for library services. Each citation in the CPIS database will have location codes indicating one or more libraries which contain the document.
- b. Research Projects - The CPIS database will contain descriptions of ongoing and completed research projects.
- c. People - The CPIS database will list Canadian experts on the polar regions.





CPIS will not contain numeric data or raw research data. <sup>what about references to the data sets?</sup> Appropriate repositories already exist for such data in most subject fields. CPIS will not be a Geographic Information System as such, <sup>? don't understand</sup> although information will be accessible from it on a geographic basis. CPIS will not include a <sup>won't answer</sup> clearing house or referral centre, <sup>questions from the public</sup> and will not interpret polar information to the public. In other words, for the purposes of this proposal the Polar Science Communications Centre is assumed to be separate from CPIS.

CPIS will cover all subjects, including the natural sciences, social sciences, arts and humanities, technology, <sup>?</sup> and all matters relating to public policy.

*ASTIS* { Geographically, CPIS will emphasize the Canadian Arctic; that is, Yukon and the Northwest Territories, Nouveau-Quebec, Labrador, and the adjacent seas. Information from other polar regions that is highly relevant to the Canadian Arctic will also be included, but CPIS will not attempt to include all polar information. <sup>which?</sup> Excellent databases already exist for non-Canadian polar regions, and the information in them will be made accessible to Canadians by linking them to CPIS.

CPIS will include information in, and be accessible using, the English and French languages. However, all information in the database will not be available in both languages. Information will be entered using the languages in which it is available.





## Products and Services

The information in CPIS will be disseminated using the same array of products and services as that provided by databases such as ASTIS. These will include direct online searching by clients, custom searches performed for clients by CPIS staff, a monthly or bi-monthly current awareness publication, an annual cumulative publication, and special publications on subjects of current importance.

7. Considerable emphasis will be placed on the delivery of information from CPIS to people in the North.

## Operational Considerations

Although CPIS will be created through the merger of a few large existing databases, it is important that information from many smaller information centres in Canada also be entered into the database. This is especially true of small information centres in the North. CPIS will develop links, either electronically or on paper, to collect this unique information. CPIS will provide funding to small information centres to cover the costs incurred in submitting information to CPIS.

The size and cost of CPIS will depend on the amount of information that exists, and on the degree of comprehensiveness that CPIS aims to achieve. The last few percent of the existing information is always very expensive to capture. The budget in this proposal is based upon the following estimates of the amount of information available and of the desirable levels of





comprehensiveness. More details on the derivation of these numbers is available on request.

*what about  
→ non-print*

a. Documents - The annual production of literature falling within the scope of CPIS is <sup>*where does this figure come from?*</sup> estimated at 10,000 documents. A substantial fraction of this is <sup>*define grey literature*</sup> grey literature produced by government departments, native organizations, and industry. It is probably cost-effective for CPIS to aim to capture 90% of the total literature, or 9000 documents per year.

b. Research Projects - At a very rough estimate there are approximately 1000 polar research projects being conducted in Canada at any one time. Using information from both licensing and funding agencies, and taking advantage of the "people" information in CPIS, it is probably feasible to capture information on 90%, or 900, of these research projects before encountering a steep rise in costs.

c. People - There are probably about 2000 Canadian polar "experts" who should be listed in this component of CPIS. That figure includes about 1000 people actively directing polar research, and another 1000 managers and policy-makers. Because those in the second category will be difficult to keep track of, an 80% level of comprehensiveness, or 1600 people, is probably appropriate for this component of CPIS.

### Budget

Attached is a preliminary budget, in 1987 dollars, for the first five years of operation of the Canadian Polar Information System. Since this is an





unsolicited proposal for discussion purposes only, the budget will not be explained in detail here. More information is available on request.

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Project expenses are highest in years 1 and 2 during the merging of existing Canadian polar databases, and then decrease somewhat once the system is fully operational. The exact timing of the various changes in staffing during years one to three cannot be predicted with certainty at this time.

All staff costs include 10% for fringe benefits. It is assumed that two of the Information Specialists, with clerical support, will be dedicated to the "research projects" and "people" components of the database, and the remainder to the "documents" component.





# Canadian Polar Information System

## Preliminary Budget - 1987 Dollars

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Staff (1.0 FTE except as noted).					
Manager	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Thesaurus Specialist	35,000	35,000	7,000	7,000	7,000
Programmer/Analyst	35,000	35,000	17,500	17,500	17,500
Acquisitions Networker	30,000	30,000	30,000	30,000	30,000
Client Trainer		30,000	15,000	15,000	15,000
Head Information Specialist	40,000	40,000	40,000	40,000	40,000
Information Specialists	(10) 300,000	(10) 300,000	(8) 240,000	(8) 240,000	(8) 240,000
Data Entry	(8) 160,000	(8) 160,000	(6) 120,000	(6) 120,000	(6) 120,000
and Clerical Support					
Staff Subtotal	\$650,000	\$680,000	\$519,500	\$519,500	\$519,500

## Operating Expenses

Funding to small information centres	100,000	100,000	100,000	100,000	100,000
Computer rental	80,000	80,000	60,000	60,000	60,000
Equipment replacement	25,000	25,000	20,000	20,000	20,000
Typesetting and printing	20,000	20,000	20,000	20,000	20,000
Travel	25,000	40,000	35,000	35,000	35,000
Telephone	5,000	5,000	5,000	5,000	5,000
Stationery and photocopying	5,000	5,000	5,000	5,000	5,000
Online searching	5,000	5,000	5,000	5,000	5,000
Postage and courier	6,000	6,000	6,000	6,000	6,000
Advertising and promotion	10,000	10,000	10,000	10,000	10,000
Miscellaneous	10,000	10,000	10,000	10,000	10,000
Operating Expenses Subtotal	191,000	206,000	276,000	276,000	276,000
Total	\$841,000	\$886,000	\$795,500	\$795,500	\$759,500

assuming there is a thesaurus





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